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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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08/878,581 06/19/97 OHTANI

A 35.G1975

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LM01/0621

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NEW YORK NY 10112

EXAMINER

CHRISTENSEN-A

ART UNIT	PAPER NUMBER
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2712
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OFFICE OF PATENT PUBLICATION
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Commissioner of Patents and Trademarks

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Office Action Summary

Application No.
08/878,581

Applicant(s)
Ohtani et al.

Examiner
Andy Christensen

Group Art Unit
2712



☒ Responsive to communication(s) filed on Apr 4, 2000

☒ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 35 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claim

☒ Claim(s) 1-26 is/are pending in the application

Of the above, claim(s) _____ is/are withdrawn from consideration

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 1-26 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☒ None of the CERTIFIED copies of the priority documents have been
☐ received.

☐ received in Application No. (Series Code/Serial Number) _____

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☐ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s) _____

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

— SEE OFFICE ACTION ON THE FOLLOWING PAGES —

1. The Applicants' arguments filed April 4, 2000 have been fully considered by the Examiner but they are not deemed to be persuasive.

The Applicants point out that in Takahashi et al. all of the light sources remain on at all times and that their sequential use is carried out by means of a rotary shielding plate and argue that Takahashi et al. do not disclose turning on a particular light source during a period in which no image sensing operation is performed by the image sensing means.

In response, the claim language is too broadly written to distinguish over Takahashi et al. in that each of the light sources is a "particular" light source and is described as having a "low on" response (Column 3, Lines 56-57). Therefore there is clearly a period between the time a light is turned on and the time its output reaches a level acceptable for an image sensing operation, that period being one during which no image sensing operation can be performed. The reason for having the light sources in Takahashi et al. remain on at all times is so that light sources having this kind of "low on" response characteristic can be used (Column 3, Lines 54-56).

The rejection will be repeated.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371 © of this title before the invention thereof by the applicant for patent.

2. Claims 1-3, 7, 9, 11-16, 20, 22 and 24-26 are rejected under 35 USC 102(e) as being anticipated by Takahashi et al. (U.S. Patent No. 5,654,756).

Regarding Claim 1, Takahashi et al. disclose (Figure 6) an image sensing apparatus comprising a plurality of light sources (1), an image sensing means (4) for sensing an image illuminated by the light sources and a light source controlling means (2) for controlling the plurality of light sources so that a particular light source of the plurality of light sources is turned on during a period in which no image sensing operation is performed by the image sensing means (Column 3, Lines 46-58).

Regarding Claim 2, Takahashi et al. disclose that the light source controlling means controls the light sources so that a light source which is turned on first in an image sensing operation is turned on during a period in which no image sensing operation is performed (Column 3, Lines 46-58; Figure 8).

Regarding Claim 3, Takahashi et al. disclose that the light source controlling means controls the light sources so that a light source which needs a long time to turn on is turned on during a period in which no image sensing operation is performed (Column 3, Lines 53-56).

Regarding Claim 7, Takahashi et al. disclose that the light source controlling means turns on the plurality of light sources during both a period in which an image sensing operation is

performed and a period in which no image sensing operation is performed (Column 3, Lines 46-58).

Regarding Claim 9, Takahashi et al disclose that the light source control means controls the light sources so that a part of the plurality of light sources is turned on during a period in which an image sensing operation is performed, and the same light source as the part of light sources which is turned on during the period in which an image sensing operation is performed is turned on also during a period in which no image sensing operation is performed (Column 3, Lines 46-58; Figure 8).

Regarding Claim 11, Takahashi et al. disclose that the light sources include a light emitting diode (Column 8, Lines 61-62).

Regarding Claim 12, Takahashi et al. disclose that the light sources includes light sources which emit light with wavelengths corresponding to red, green and blue (Column 4, Lines 11-12).

Regarding Claim 13, Takahashi et al. disclose that the light sources include light sources which emit light with wavelengths corresponding to yellow, cyan and magenta (Column 4, Line 14).

As to Claims 14-16, 20, 22 and 24-26, see Examiner's comments regarding Claims 1-3, 7, 9 and 11-13 respectively.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 4-5, 8, 10, 17-18, 21 and 23 are rejected under 35 USC 103(a) as being unpatentable over Takahashi et al. in view of Tani et al. (U.S. Patent No. 5,877,487).

Regarding Claims 4 and 8, Takahashi et al. disclose that the light sources are turned on sequentially during a period in which an image sensing operation is performed and during a period in which no image sensing operation is performed (Column 3, Lines 46-58; Figure 8) so as to produce a color image during the period in which the image sensing operation is performed, but do not disclose that all the light sources are turned on at the same time.

However, Tani et al. disclose simultaneously turning all of a plurality of light sources used to illuminate an object in order to produce a white light illumination of the object for operation in a monochromatic mode (Column 11, Lines 11-19). It would have been obvious to one of ordinary skill in the art at the time of the invention to simultaneously illuminate the plurality of light sources of Takahashi et al. in order to enable the producing of a monochromatic image thereby

increasing the utility of the device by providing a monochromatic operating mode in addition to the color mode of operation.

Regarding Claim 5, Takahashi et al. and Tani et al. disclose that the light source controlling means sequentially turns on the plurality of light sources so that the image sensing means may sense an image in a color mode (Takahashi et al.; Column 1, Line 10).

Regarding Claim 10, Takahashi et al. disclose all of the limitations except that of the light source controlling means turning on a part of the plurality of light sources so that the image sensing means may sense an image in a monochromatic mode.

However, Tani et al. disclose turning on a part of a plurality of light sources so that an image sensing means may sense an image in a monochromatic mode (Column 9, Lines 57-64). It would have been obvious to one of ordinary skill in the art at the time of the invention to configure the Takahashi et al., device to have the light source controlling means turn on a part of the plurality of light sources in order to enable the producing of a monochromatic image thereby increasing the utility of the device by providing a monochromatic operating mode in addition to the color mode of operation.

As to Claims 17-18, 21 and 23, see Examiner's comments regarding Claim 4-5, 8 and 10 respectively.

4. Claims 6 and 19 are rejected under 35 USC 103(a) as being unpatentable over Takahashi et al. in view of Tani et al. and further in view of Lim et al. (U.S. Patent No. 5,532,825).

Regarding Claim 6, Takahashi et al. and Tani et al. disclose that the light source controlling means sequentially turns on the plurality of light sources (Takahashi et al.; Figure 8) but the mode of operation is a color mode and not a monochrome mode.

However Lim et al. disclose arranging an image sensing device so as to sense an image in a monochromatic mode (Column 1, Lines 15-23; Column 2, Line 64) using sequential illumination by a plurality of light sources (Column 3, Lines 31-49; Column 4, Lines 49-51). To one of ordinary skill in the art at the time of the invention it would have been an obvious variation of Takahashi et al. and Tani et al. to configure the device so as to produce its monochromatic image using sequentially illuminated light sources since it is clear that a monochrome mode may be achieved using such an illumination operation.

As to Claim 19, see Examiner's comments regarding Claim 6.

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Application/Control Number: 08/878,581
Art Unit: 2712

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6. Any response to this final action should be mailed to:

Box AF
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Washington, D.C. 20231

or faxed to:


(703) 308-6306 (for formal communications; please mark "EXPEDITED PROCEDURE");
(for informal or draft communications, please label "PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington.
VA., Sixth Floor (Receptionist).

7. Any inquiry regarding this communication or earlier communications from the examiner should be directed to Andy Christensen whose telephone number is (703) 308-9644.

If attempts to reach the examiner by telephone are unsuccessful the examiner's supervisor, Wendy Garber, can be reached on (703) 305-4929.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-3900.


Wendy Garber
Supervisory Patent Examiner
Technology Center 2700

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June 14, 2000